



## **FACULTY OF SCIENCE**

### **DEPARTMENT OF ZOOLOGY**

**MODULE      CONSERVATION GENETICS (ZOO 0098)**

**CAMPUS      APK**

**EXAM          NOVEMBER EXAM 2015**

**DATE: 20 November**

**SESSION: 8:30**

**ASSESSOR(S)**

**Prof B van Vuuren**

**INTERNAL MODERATOR**

**Prof P Teske**

**EXTERNAL MODERATOR**

**Prof P King**

**DURATION    3 HOURS**

**MARKS    100**

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**NUMBER OF PAGES: 2 PAGES**

**INSTRUCTIONS:      Answer all the questions.**

### **Question 1**

*Hunting makes a significant contribution to conservation.*

Discuss this statement in detail. Include arguments for and against this statement in your answer. Which of these arguments do you believe to be the more acceptable, and why?

(10)

### **Question 2**

Two opposing approaches to the conservation of biodiversity are to (a) focus on single species or (b) conserve large areas to protect all the species that occur there. Discuss in detail the advantages and disadvantages of each approach. Which of these do you believe is the more successful approach in conservation, and why?

(35)

### **Question 3**

Invasive species are often listed as one of the main threats to biodiversity globally, with public and academic recognition of the problems associated with biological invasions growing exponentially over the past decade. Discuss invasive species and the threat they pose to biodiversity in detail. In your answer you should include aspects of transport vectors and pathways, trends in the number of invaders, the importance of propagule pressure, local habitat disturbance, whether specific genotypes / phenotypes are better invaders than others, as well as the ecological impacts of invasive species.

(35)

### **Question 4**

There is much debate in the literature regarding the various species concepts, and what constitutes a species. Conservation biologists have moved away from these taxonomic impediments and have adopted a new approach to recognizing units worthy of conservation. Discuss in some detail these concepts (Management Unit and Evolutionary Significant Unit). Refer in your answer to the history of these concepts, different approaches to these concepts (including genetic and ecological aspects), and provide an example of where these concepts were applied in practise.

(20)

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